

8



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,191	01/20/2004	Douglas B. Noyes	81686/7442	2474

7590 05/26/2005

Douglas B. Noyes  
c/o High Speed Industries, Inc.  
542 3rd Street  
Lake Elsinore, CA 92530

EXAMINER
----------

KEASEL, ERIC S

ART UNIT	PAPER NUMBER
----------	--------------

3754

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/762,191	Applicant(s) NOYES ET AL	
	Examiner Eric Keasel	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The references cited in the parent application have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 appears to be dependent on the wrong claim. As written, "the leak rate" lacks antecedent basis. It would appear that this claim should be dependent on one of the previous claims that positively recites "a leak rate" (e.g. claims 1-19 or 22); however, as written, one of ordinary skill in the art would not be able to guess which claim it should be dependent upon.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-4, 6-28, 30-47, and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by France et al. (US Patent Number 6,244,566).

France et al. disclose a shut-off valve assembly comprising: a hollow valve body having a first opening (21) and a second opening (22); a valve seat (35) positioned within the hollow valve body proximate to the first opening; a first diaphragm assembly (60), wherein a deflectable portion of the first diaphragm assembly is attached to an interior surface of the hollow valve body forming a first volume between the valve seat and the first diaphragm assembly; a second diaphragm (70) attached to another portion of the interior of the hollow valve body and attached to the first diaphragm assembly such that a second volume is defined between the second diaphragm and the second opening, wherein a third volume is formed between the first diaphragm assembly and the second diaphragm, the third volume sealed from the first volume and the second volume by the first diaphragm assembly and the second diaphragm; at least one flow hole (57) formed in the first diaphragm assembly, wherein the at least flow one hole allows a process flow to flow between the first volume and the second volume; and a self-aligning head

Art Unit: 3754

assembly comprising: a flexible stem (50) attached at a first end to another portion of the first diaphragm assembly; and a valve head (54, 55) coupled to a second end of the stem; wherein a deflection of the deflectable portion of the first diaphragm assembly and the second diaphragm allows the other portion of first diaphragm assembly to move in order to open and close the valve head from the valve seat; wherein the valve head comprises a floating valve head (54, 55) held in position between the second end of the stem and the valve seat by the second end of the stem; wherein the valve head comprises a poppet wherein at least a portion (55) of the poppet is spherical; wherein the process flow generally flows in-line through the hollow valve body between the first opening and the second opening via the first volume and the second volume; further comprising a mechanical actuator assembly coupled to the first diaphragm assembly and the second diaphragm for causing the deflection of the deflectable portion of the first diaphragm assembly and the second diaphragm, and substantially contained within an external footprint of the hollow valve body providing an actuating force axial to the movement of the process flow through the hollow valve body; wherein the actuator assembly variably deflects the deflectable portion of the first diaphragm assembly and the second diaphragm which moves the other portion of the first diaphragm assembly a variable distance, such that the position of the valve head relative to the valve seat is variably selectable, wherein giving the shut-off valve assembly capabilities of a proportional valve assembly; wherein the deflectable portion comprises a ring portion and the other portion of the first diaphragm assembly comprises a sleeve portion (connected to part 56); wherein the actuator assembly further comprises a washer (72) positioned within the third volume and surrounding the sleeve portion, wherein the washer indirectly contacts the second diaphragm; wherein the actuator assembly further comprises a spring (78)

Art Unit: 3754

within the third volume located between the second diaphragm and a first side of the washer, wherein the spring contacts the second diaphragm and the first side of the washer and exerts pressure against the first side of the washer, wherein the first diaphragm assembly is held such that the valve head is sealed into the valve seat; further comprises an actuator member coupled to an actuator, wherein upon operation of the actuator, the actuator member applies a force against a second side of the washer, causing the washer to deflect the second diaphragm and the ring portion of the first diaphragm assembly in an opposite direction as held by the spring, wherein the valve head is caused to unseal from the valve seat; wherein the actuator member comprises a ball (71) held between the actuator and the washer; wherein the actuator comprises a ring having a detent (48, 84), wherein the actuator member sits within the detent, wherein upon rotation of the actuator, the actuator member is forced out of the detent such that the actuator member applies pressure against the second side of the washer.

Re the valve head is adapted to self-align into the valve seat with a leak rate of less than or equal to  $4 \times 10^{-9}$  atmosphere cc of Helium/sec (and also at temperatures up to 1000 degrees centigrade), this parameter is dependent on many unclaimed and undisclosed variables (e.g. the relative and absolute pressures upstream and downstream of the valve seat and the presence of Helium in the flow path). Both applicant's valve and the valve of France et al. will meet this limitation under certain circumstances (e.g. a vacuum on both sides of the valve seat or no Helium in the flow path); thus France et al. anticipate this limitation. However, at very high pressure differences of Helium upstream and downstream of the valve seat, then neither valve (applicant's or France et al.) would likely meet this limitation.

Art Unit: 3754

Re the surface area of the deflectable portion of the first diaphragm assembly facing the first volume is approximately equal to the surface area of the second diaphragm facing the second volume, such that a first force exerted on the deflectable portion by the process flow in the first volume substantially cancels the force in the opposite direction exerted on the second diaphragm by the process flow in the second volume, wherein the first diaphragm assembly and the second diaphragm are substantially balanced with respect to the pressure of the process flow, France et al. does not explicitly state this; however, the drawing shows these features within the bounds of broadly worded "approximately" and "substantially".

### ***Double Patenting***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

8. Claims 5, 29, and 48 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 19, and 33 of prior U.S. Patent No. 6,679,476. This is a double patenting rejection.

Art Unit: 3754

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1, 19, and 33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 20, and 35 of U.S. Patent No. 6,679,476. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 20, and 35 of U.S. Patent No. 6,679,476 contain all the limitations of claims 1, 19, and 33 of the present application.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chandler (US Patent Number 2,690,917), Miller et al. (US Patent Number 2,715,512), Egert et al. (US Patent Number 4,667,931), Smith (US Patent Number 5,407,173), and Moore (US Patent Number 6,213,144) disclose similar valves.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (571) 272-4929. The examiner can normally be reached on Monday-Friday.



Art Unit: 3754

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Handwritten signature of Eric Keasel in cursive script, followed by the date 23 MAY 2005.

Eric Keasel  
Primary Examiner  
Art Unit 3754